Claims

1. A network broadcasting system with provision for delivering broadcasts and also advertisements or other messages to individual users comprising:

a tuner software system designed to be installed within the computers of users who wish to receive broadcasts over the network and including a broadcast reception component that can receive a broadcast from the network and present it to the user;

a broadcasting system that broadcasts over the network to computers containing the tuner software system which have been enabled by their users to receive a broadcast;

a network signaling mechanism that signals over the network to computers containing the tuner software system and receiving a broadcast informing such computers of when advertisements or other information will appear within a broadcasts; and

a message presentation system associated with the tuner software system that responds to the signals by obtaining and presenting to the user an advertisement or other message simultaneously with, or as a replacement for, a portion of an incoming broadcast.

2. A networked computer broadcasting system in accordance with claim 1 in which the message presentation system includes

a multimedia advertisement or other message server containing advertisements or other messages;

an advertisement or message request component of said tuner software system that requests an advertisement or other message from said multimedia advertisement or other message server; and

the multimedia advertisement or other message server, in response to such a request, returns the requested advertisement or other message.

3.   A networked computer broadcasting system in accordance with claim 2 wherein

at least some of the advertisements or other messages contained within the multimedia advertisement or other message server are associated with demographic information;

the multimedia advertisement or other message server also has access to demographic information of users and can associate that information with advertisement or other message requests received from the tuner software system of such users; and

when the multimedia advertisement or other message server receives a request for an advertisement or message which request can be associated with demographic information associated with a user and which request is for one of a set of advertisements or messages also associated with demographic information, the multimedia advertisement or other message server compares the two sets of demographic information and then returns to the requesting tuner software system those advertisements or other messages associated with demographic information most closely matched to the demographic information associated with the user.

4.   A networked computer broadcasting system in accordance with claim 3 wherein the demographic information comprises the user's gender, age, and geographic location.

5.   A networked computer broadcasting system in accordance with claim 4 wherein the geographic location for the user is specified as a zip code.

6.   A networked computer broadcasting system in accordance with claim 5 wherein the multimedia advertisement or other message server is able to transform zip code information into region of the country information.

7.   A networked broadcasting system in accordance with claim 1 wherein the broadcasting system receives commands from a producer system to have the tuner software systems present messages to the users, and wherein at least some of these commands cause the network signaling mechanism to signal the tuner software systems accordingly.

8. A networked broadcasting system in accordance with claim 7 wherein the producer system is connected by the network to the network signaling mechanism which is a stream encoder and wrapper which receives both the broadcast and also the producer commands and integrates them into a composite signal that is broadcast over the network to the user's computers.

9. A networked broadcasting system in accordance with claim 1 wherein the broadcasting system captures from the broadcast commands to have the tuner software systems present advertisements to the users, and wherein at least some of these commands cause the network signaling mechanism to signal the tuner software systems accordingly.

10. A networked computer broadcasting system in accordance with claim 9 wherein at least some of the commands captured from the broadcast are fed to the network signaling mechanism which is a stream encoder and wrapper which receives these commands and also the broadcast and integrates them into a composite signal that is broadcast over the network to the users' computers.

11. A networked broadcasting system in accordance with claim 9 which further includes

an insert and coordinating server into which said commands captured from the broadcast are fed and which also receives log files from a traffic system defining which advertisements are to be presented in what sequence during the broadcast, and

the insert and coordinating server adds to said commands captured from the broadcast specific advertisement identification information, thereby forming advertisement identifying commands which are then fed to the network signaling mechanism for transmission to the users' computers to cause the advertisements to be presented to the users.

12. A networked broadcasting system in accordance with claim 11 wherein the insert and coordinating server generates prequeue commands ahead of the time when an advertisement is to be presented to the user, the prequeue commands including the advertisement identification information; and

the insert and coordinating server sends the prequeue commands through the network signaling system to the tuner software systems to cause them to download advertisements ahead of when they are to be broadcast, and later generates fire commands which cause the tuner software systems to present the advertisements to the users at the proper times.

13. A networked broadcasting system in accordance with claim 1 wherein the broadcasting system receives commands from a producer system to have the tuner software systems present messages to the users and captures commands from the broadcast to have the tuner software systems present advertisements to the users, and wherein at least some of these commands cause the network signaling mechanism to signal the tuner software systems accordingly.

14. A networked broadcasting system in accordance with claim 13 wherein at least some of the commands received from the producer system and captured from the broadcast are fed into the network signaling mechanism which is a stream encoder and wrapper along with the broadcast, and the stream encoder and wrapper integrates them into a composite signal that is broadcast over the internet to the users' computers.

15. A networked broadcasting system in accordance with claim 13 which further includes

an insert and coordinating server into which said commands captured from the broadcast are fed and which also receives log files from a traffic system defining which advertisements are to be presented in what sequence during the broadcast, and

the insert and coordinating server adds to said commands captured from the broadcast specific advertisement identification information, thereby forming advertisement identifying commands which are then fed to the network signaling mechanism for transmission to the users' computers to cause the advertisements to be presented to the users.

16. A networked broadcasting system in accordance with claim 15 wherein the insert and coordinating server generates prequeue commands ahead of

the time when an advertisement is to be presented to the user, the prequeue commands including the advertisement identification information; and

the insert and coordinating server sends the prequeue commands through the network signaling mechanism to the tuner software systems to cause them to download advertisements ahead of when they are to be broadcast, and later generates fire commands which cause the tuner software systems to present the advertisements to the users.

17. A networked broadcasting system in accordance with claim 16 wherein the insert and coordinating server also accepts producer commands from the network and forwards them to the network signaling mechanism.

18. A network broadcasting system with provision for delivering broadcasts and also advertisements or other messages to individual users comprising:

a tuner software system designed to be installed within the computers of users who wish to receive broadcasts over the network and including a broadcast reception component that can receive a broadcast from the network and present it to the user;

a broadcasting system that broadcasts over the network to computers containing the tuner software system which have been enabled by their users to receive a broadcast;

an advertisement or other message insertion system connecting to said broadcasting system that can replace portions of the broadcast or insert into the broadcast advertisements or other messages;

a network signaling mechanism that signals over the network to computers containing the tuner software system and receiving a broadcast informing such computers of when advertisements or other information will appear within a broadcasts; and

a message presentation system associated with the tuner software system that responds to the signals by obtaining and presenting to the user an advertisement or other message simultaneously with, or as a replacement for, an incoming broadcast.

19. A networked computer broadcasting system in accordance with claim 18 in which the message presentation system includes

a multimedia advertisement or other message server containing advertisements or other messages;

an advertisement or message request component of said tuner software system that requests an advertisement or other message from said multimedia advertisement or other message server; and

the multimedia advertisement or other message server, in response to such a request, returns the requested advertisement or other message.

20. A networked computer broadcasting system in accordance with claim 19 wherein

at least some of the advertisements or other messages contained within the multimedia advertisement or other message server are associated with demographic information;

the multimedia advertisement or other message server also has access to demographic information of users and can associate that information with advertisement or other message requests received from the tuner software system of such users;

when the multimedia advertisement or other message server receives a request for an advertisement or message which request can be associated with demographic information associated with a user and which request is for one of a set of advertisements or messages also associated with demographic information, the multimedia advertisement or other message server compares the two sets of demographic information and then returns to the requesting tuner software system those advertisements or other messages associated with demographic information most closely matched to the demographic information associated with the user.

21. A networked computer broadcasting system in accordance with claim 20 wherein the demographic information comprises the user's gender, age, and geographic location.

22. A networked computer broadcasting system in accordance with claim 21 wherein the geographic location for the user is specified as a zip code.

23. A networked computer broadcasting system in accordance with claim 22 wherein the multimedia advertisement or other message server is able to transform zip code information into region of the country information.

24. A networked broadcasting system in accordance with claim 18 wherein the broadcasting system receives commands from a producer system to have the tuner software systems present messages to the users, and wherein at least some of these commands cause the network signaling mechanism to signal the tuner software systems accordingly.

25. A networked broadcasting system in accordance with claim 24 wherein the producer system is connected by the network to the network signaling mechanism which is a stream encoder and wrapper which receives both the broadcast and also the producer commands and integrates them into a composite signal that is broadcast over the network to the user's computers.

26. A networked broadcasting system in accordance with claim 18 wherein the broadcasting system captures from the broadcast commands to have the tuner software systems present advertisements to the users, and wherein at least some of these commands cause the network signaling mechanism to signal the tuner software systems accordingly.

27. A networked computer broadcasting system in accordance with claim 26 wherein at least some of the commands captured from the broadcast are fed to the network signaling mechanism which is a stream encoder and wrapper which receives these commands and also the broadcast and integrates them into a composite signal that is broadcast over the network to the users' computers.

28. A networked broadcasting system in accordance with claim 26 which further includes

an insert and coordinating server into which said commands captured from the broadcast are fed and which also receives log files from a traffic system defining

which advertisements are to be presented in what sequence during the broadcast, and

the insert and coordinating server adds to said commands captured from the broadcast specific advertisement identification information, thereby forming advertisement identifying commands which are then fed to the network signaling mechanism for transmission to the users' computers to cause the advertisements to be presented to the users.

29. A networked broadcasting system in accordance with claim 28 wherein the insert and coordinating server generates prequeue commands ahead of the time when an advertisement is to be presented to the user, the prequeue commands including advertisement identification information; and

the insert and coordinating server sends the prequeue commands through the network signaling system to the tuner software systems to cause them to download advertisements ahead of when they are to be broadcast, and later generates fire commands which cause the tuner software systems to present the advertisements to the users.

30. A networked broadcasting system in accordance with claim 18 wherein the broadcasting system receives commands from a producer system to have the tuner software systems present messages to the users and captures commands from the broadcast to have the tuner software systems present advertisements to the users, and wherein at least some of these commands cause the network signaling mechanism to signal the tuner software systems accordingly.

31. A networked broadcasting system in accordance with claim 30 wherein at least some of the commands received from the producer system and captured from the broadcast are fed into the network signaling mechanism which is a stream encoder and wrapper along with the broadcast, and the stream encoder and wrapper integrates them into a composite signal that is broadcast over the internet to the users' computers.

32. A networked broadcasting system in accordance with claim 30 which further includes

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an insert and coordinating server into which said commands captured from the broadcast are fed and which also receives log files from a traffic system defining which advertisements are to be presented in what sequence during the broadcast, and

the insert and coordinating server adds to said commands captured from the broadcast specific advertisement identification information, thereby forming advertisement identifying commands which are then fed to the network signaling mechanism for transmission to the users' computers to cause the advertisements to be presented to the users.

33. A networked broadcasting system in accordance with claim 32 wherein the insert and coordinating server generates prequeue commands ahead of the time when an advertisement is to be presented to the user, the prequeue commands including advertisement identification information; and

the insert and coordinating server sends the prequeue commands through the network signaling mechanism to the tuner software systems to cause them to download advertisements ahead of when they are to be broadcast, and later generates fire commands which cause the tuner software systems to present the advertisements to the users.

34. A networked broadcasting system in accordance with claim 33 wherein the insert and coordinating server also accepts producer commands from the network and forwards them to the network signaling mechanism.

35. A networked computer broadcasting system with provision for delivering broadcasts and also advertisements or other messages to individual users, said system comprising:

a tuner software system designed to be installed within the computers of users who wish to receive broadcasts over the network and including a broadcast reception component that can receive a broadcast from the network and present it to the user and an advertisement or other message presentation component that can, in response to incoming network commands, display multimedia programs in place of, or simultaneously with, an incoming broadcast;

a broadcasting system that broadcasts over the network to computers containing the tuner software system which have been enabled by their users to receive a broadcast, including a mechanism for sending network commands to the tuner software systems signaling when the timer systems are to present multimedia presentations which correspond to advertisements or other messages to the users;

a producer system designed to be operated by a producer with a command generation system that permits a producer to originate, and present to the network, commands calling for various multimedia presentations including advertisements and other messages; and

an advertisement and other message insertion system connected to the network that receives the producer commands and sends them on to the computers of users who are receiving the corresponding broadcast, whereby the producer controls the presentation of advertisements and other messages to the user.

36.   A networked computer broadcasting system in accordance with claim 35 wherein

the tuner software system includes a provision for displaying and thereby presenting a score or other number relevant to a broadcast to a user, and

the producer system includes a score or other number entry system that permits a score or other number to be entered into the producer system, transferred across the network to the insertion system, and transferred from there to the tuner software systems.

37.   A networked computer broadcasting system in accordance with claim 35 wherein

the tuner software system includes a provision for displaying and thereby presenting a scrolled text message to a user, and

the producer system includes a keyboard or touch screen or speech recognition system that enables the producer to enter, review, and then transfer across the network a text message which is transferred across the network to the insertion system, and transferred from there to the tuner software system, where the message is presented scrollably to a user.;

38.   A networked computer broadcasting system in accordance with claim 35 wherein

the tuner software system includes a mechanism for accessing prerecorded multimedia messages relating to a broadcast, and

the producer system includes message presentation controls which, when actuated by the producer, cause commands to be sent over the network to the insertion system, and from there to the tuner software systems, which command the tuner software systems to present designated ones of those prerecorded multimedia messages to the users.

39.   A networked computer broadcasting system in accordance with claim 35 herein

the producer system includes advertisement presentation controls which, when actuated by the producer, can command the display of advertising messages and which can prevent or postpone the display of advertising messages by the tuner software systems, these commands being conveyed over the network to the insertion system and from there to the tuner software systems.

40.   A networked computer broadcasting system in accordance with claim 35 wherein the producer's computer is a hand-held computer wirelessly connected into the network.

41.   A networked computer broadcasting system in accordance with claim 40 wherein

the tuner software system includes a provision for displaying and thereby presenting a score or other number relevant to a broadcast to a user, and

the producer system includes a score or other number entry system that permits a score or other number to be entered into the producer system, transferred across the network to the insertion system, and transferred from there to the tuner software systems.

42.   A networked computer broadcasting system in accordance with claim 40 wherein

the tuner software system includes a provision for displaying and thereby presenting a scrolled text message to a user, and

the producer system includes a text entry system that enables the producer to enter, review, and then transfer across the network a text message which is transferred across the network to the insertion system, and transferred from there to the tuner software system, where the message is presented scrollably to a user.

43.   A networked computer broadcasting system in accordance with claim 40 wherein

the tuner software system includes a mechanism for accessing prerecorded multimedia messages relating to a broadcast, and

the producer system includes controls which, when actuated by the producer, cause commands to be sent over the network to the insertion system, and from there to the tuner software systems, which command the tuner software systems to present designated ones of those prerecorded multimedia messages to the users.

44.   A networked computer broadcasting system in accordance with claim 40 wherein

the producer system includes controls which, when actuated by the producer, can command the display of advertising messages and which can prevent or postpone the display of advertising messages by the tuner software systems, these commands being conveyed over the network to the insertion system and from there to the tuner software systems.

45.   A networked computer system in accordance with claim 35 and used for broadcasting live or prerecorded sports events under the control of a producer, wherein

the producer system includes controls which, when actuated by the producer, can command the display of scores, multimedia messages, and text messages and can also cause the presentation of advertisements and delay the presentation of advertisements, said commands being conveyed over the network to the insertion system and from there to the tuner software systems; and

wherein the tuner software system includes provision for displaying to the user on a computer screen scores, multimedia messages, and text messages, as well as advertisements to the users.

46.   A networked computer system in accordance with claim 45 wherein the tuner software system has two modes of display to the user, one mode filling a large portion of the user's screen, and a second mode occupying only a small portion of the user's screen, and where either screen display includes provision for displaying scores and text messages, and where advertisements and multimedia messages are presented in pop-up windows in conjunction with the second mode of display.

47.   A network radio broadcasting system with provision for delivering broadcasts and also advertisements or other messages to individual users comprising:

a tuner software system designed to be installed within the computers of users who wish to receive broadcasts over the network and including a broadcast reception component that can receive a broadcast from the network and present it to the user and also an advertisement or other message insertion component that can download a multimedia advertisement or other message from a server and present it to the user simultaneously with or as a replacement for an incoming radio broadcast;

a broadcasting system that broadcasts over the network to computers containing the tuner software system which have been enabled by their users to receive a broadcast;

an advertisement or other message insertion system connecting to said broadcasting system that can replace portions of the broadcast with advertisements or other messages;

a network signaling mechanism that signals over the network to computers containing the tuner software system and receiving a broadcast informing such computers in advance of when multimedia advertisements or other information is to be presented to the user, and that also signals when those advertisements or other information are to be presented;

a mechanism within said tuner software system that can respond to said in advance signaling by downloading in advance of presentation multimedia advertisements or other messages at a controlled rate of downloading which does not interfere with reception of the broadcast and that can also respond to said presentation signaling by presenting the advertisements or other information at the proper time.

48. A networked computer broadcasting system in accordance with claim 47 wherein, as an advertisement or other message is downloaded, the system measures the bandwidth occupied by the download process, compares that to the network sustainable bandwidth and the bandwidth required by the broadcast, and then throttles back the advertisement or other message download rate as needed to insure that the message downloading process does not adversely affect the broadcast process.

49. A networked computer broadcasting system in accordance with claim 48 wherein incoming multimedia data is received from a TCP/IP socket, and wherein the throttling back of the incoming data is accomplished by delaying the acceptance of data from the TCP/IP socket.

50. A networked computer broadcasting system in accordance with claim 47 wherein the tuner software system includes provision for managing multiple simultaneous requests for the downloading of advertisements or other messages, the system maintaining a list of all such advertisements or other messages and their network addresses, the system periodically reviewing the list seeking an advertisement or other message that the network reports can be downloaded, and the system initiating the downloading of the advertisements or other messages sequentially.

51. A networked computer broadcasting system in accordance with claim 50 wherein, as an advertisement or other message is downloaded, the system measures the bandwidth occupied by the download process, compares that to the network sustainable bandwidth and the bandwidth required by the broadcast, and then throttles back the advertisement or other message download rate as needed to

insure that the message downloading process does not adversely affect the broadcast process.

52. A networked computer broadcasting system in accordance with claim 51 wherein incoming multimedia data is received from a TCP/IP socket, and wherein the throttling back of the incoming data is accomplished by delaying the acceptance of data from the TCP/IP socket.

53. A networked computer broadcasting system in accordance with claim 47 wherein, in cases where a given tuner software system is unable to download fully an advertisement or other message prior to the time when the presentation signal indicates it should be displayed to the user, the tuner software system cancels the presentation of the advertisement or other message to the user and permits the user to receive the broadcast material instead.

54. A networked computer broadcasting system in accordance with claim 53 wherein the broadcasting system inserts advertisements into the broadcast at times when the tuner software system displays advertisements such that if a given tuner cancels a multimedia presentation of an advertisement, the user is still presented with the advertisement inserted into the broadcast.

55. A networked computer broadcasting system optimized for the reception of sports and other similar live and prerecorded broadcasts comprising:

a source of a live or prerecorded broadcast including commands from the source of the broadcast indicating appropriate places where advertisements or other messages may be inserted into the broadcast;

a producer system generating producer commands calling for the addition of scores and other textual messages as well as multimedia messages to a broadcast, and including provision for requesting the inclusion of advertisements in a broadcast or the prevention of the inclusion of advertisements in a broadcast;

a traffic system designed to facilitate the automated presentation and sale of multiple advertising opportunities to advertisers in packages that may be broken down by position of the advertisement within a broadcast (pregame, play-by-play, or postgame, etc.), by specific broadcast series, by specific group of broadcast series,

and by range of dates as well as by number of advertising opportunity of a particular type, used in varying combinations in accordance with the needs and desires of the advertisers; the traffic system generating logs defining which advertisements are to be inserted into which portions of each broadcast in what order, and said logs, together with performance data gathered during each broadcast, being later used for billing purposes;

a tuner software system designed to be installed within the computers of users who wish to receive broadcasts over the network and including a broadcast reception component that can receive a broadcast from the network and present it to the user, a message presentation system that can selectively present advertisements and other multimedia messages to the user in response to commands, downloading such messages when necessary from a server ahead of time in response to prequeue commands, and presenting at least some of them at times indicated by fire commands, and a producer information presentation system that can present scores and other text messages as well as multimedia messages to the user in response to the receipt of producer commands, all such commands being conveyed to the tuner software system along with the broadcast; and

a broadcasting system that broadcasts over the network to computers containing the tuner software system which have been enabled by their users to receive a broadcast, including an insertion system that inserts advertisements or other messages into a broadcast and that also inserts the commands conveyed by the broadcast to the tuner software system, such insertions and commands originating from a coordinating system that is controlled by commands received from the source of the broadcast and from the producer system and that extracts from the logs the identification of the advertisements or other messages inserted by the insertion system or command to be presented by the tuner system.